

Amendments to the Claims

The listing of claims will replace all prior versions and listings of claims in the application.

Claim 1. (Previously Presented) A fuel cell system comprising:

- a fuel supply;
- a fuel cell adapted to provide electricity for an electronic device; and
- a valve comprising

- a first valve component connected to either the fuel supply or the fuel cell,
 - a second valve component connected to the other of either the fuel supply or the fuel cell,

wherein each valve component comprises a housing and a biased slidable inner body, and wherein the slidable inner body cooperates with a sealing member to form an internal seal in each valve component, and wherein during connection the first valve component and the second valve component form an inter-component seal at least before the internal seals open to create a fluid flow path through the valve, and

wherein the valve components cooperate with each other to open the internal seal in each valve component.

Claim 2. (Previously Presented) The fuel cell system of claim 1, wherein the first valve component is connected to the fuel supply and the second valve component is connected to the fuel cell.

Claim 3. (Previously Presented) The fuel cell system of claim 1, wherein the first valve component is connected to the fuel cell and the second valve component is connected to the fuel supply.

Claim 4. (Previously Presented) The fuel cell system of claim 1, wherein the slidable inner body is a sphere.

Claim 5. (Previously Presented) The fuel cell system of claim 1, wherein the slidable inner body comprises a pushrod.

Claim 6. (Previously Presented) The fuel cell system of claim 1, wherein the slidable inner body is biased by a spring.

Claim 7. (Previously Presented) The fuel cell system of claim 6, wherein the spring is made from stainless steel.

Claim 8. (Previously Presented) The fuel cell system of claim 6, wherein the spring is made from an elastomeric material.

Claim 9. (Previously Presented) The fuel cell system of claim 8, wherein the elastomeric material comprises ethylene propylene, nitrile rubber, ethylene propylene diene methylene terpolymer or fluoro-elastomer.

Claim 10. (Previously Presented) The fuel cell system of claim 8, wherein the spring has a substantially straight sidewall.

Claim 11. (Previously Presented) The fuel cell system of claim 8, wherein the spring has substantially wavy sidewall.

Claim 12. (Previously Presented) The fuel cell system of claim 6, wherein the spring constants of the spring in the valve components are substantially the same.

Claim 13. (Previously Presented) The fuel cell system of claim 6, wherein the spring constants of the spring in the valve components are substantially different.

Claim 14. (Previously Presented) The fuel cell system of claim 13, wherein the spring constant of the spring in the valve component connected to the fuel cell is lower than the spring constant of the spring in the valve component connected to the fuel supply.

Claim 15. (Previously Presented) The fuel cell system of claim 1, wherein the sealing member is an o-ring.

Claim 16. (Previously Presented) The fuel cell system of claim 15, wherein the internal seal is located between the o-ring and the slidable inner body.

Claim 17. (Previously Presented) The fuel cell system of claim 1, wherein the sealing member is a sealing face.

Claim 18. (Previously Presented) The fuel cell system of claim 17, wherein the sealing face is positioned on a front surface of the slidable inner body and the internal seal is located between the sealing face and a portion of the housing.

Claim 19. (Previously Presented) The fuel cell system of claim 18, wherein the portion of the housing is a lip.

Claim 20. (Previously Presented) The fuel cell system of claim 17, wherein the sealing face is positioned on the housing and the internal seal is between the sealing face and the slidable inner body.

Claim 21. (Previously Presented) The fuel cell system of claim 1, wherein the sealing member is an elastomeric ball.

Claim 22. (Previously Presented) The fuel cell system of claim 1, wherein the inter-component seal is formed by a portion of the housing of the first valve component and the sealing member of the second valve component.

Claim 23. (Previously Presented) The fuel cell system of claim 1, wherein the inter-component seal is formed by a portion of the housing of the second valve component and the sealing member of the first valve component.

Claim 24. (Previously Presented) The fuel cell system of claim 1, wherein the inter-component seal is formed between the housing of the first valve component and the housing of the second housing component.

Claim 25. (Previously Presented) The fuel cell system of claim 1, wherein the inter-component seal is formed before any internal seal opens.

Claim 26. (Previously Presented) The fuel cell system of claim 1, wherein the inter-component seal is formed after the internal seal of the valve component connected to the fuel cell opens.

Claim 27. (Previously Presented) The fuel cell system of claim 1, wherein the fluid flow path comprises a space between the housing and the slidable inner body.

Claim 28. (Previously Presented) The fuel cell system of claim 27, wherein the fluid flow path further comprises at least one channel defined on the slidable inner body.

Claim 29. (Previously Presented) The fuel cell system of claim 1, wherein the fluid flow path comprises at least one channel defined on one of the slidable inner bodies.

Claim 30. (Previously Presented) The fuel cell system of claim 1, wherein the fluid flow path comprises a plurality of channels defined on the slidable inner body of both valve components.

Claim 31. (Previously Presented) The fuel cell system of claim 1, wherein the valve further comprises a liquid retention material surrounding the first and second valve components.

Claim 32. (Previously Presented) The fuel cell system of claim 1, wherein the valve further comprises a liquid retention material within at least one of the valve components.

Claim 33. (Previously Presented) The fuel cell system of claim 32, wherein the liquid retention material is located in the downstream direction from the internal seal of the valve component.

Claim 34. (Previously Presented) The fuel cell system of claim 1, wherein the valve further comprises a retainer to keep the two valve components in the connected position.

Claim 35. (Previously Presented) The fuel cell system of claim 34, wherein the retainer is a snap-on retainer.

Claim 36. (Previously Presented) The fuel cell system of claim 34, wherein the retainer comprises a spring arm connected to the first valve component, a head disposed at the end of the arm and a receiving cavity defined on the second valve component, said cavity is sized and dimensioned to receive said head.

Claims 37-38 (Canceled)

Claim 39. (Previously Presented) The fuel cell system of claim 1, wherein at least one of the valve components comprises a second internal seal.

Claim 40. (Previously Presented) The fuel cell system of claim 39, wherein the second internal seal is provided by a closed washer.

Claim 41. (Previously Presented) The fuel cell system of claim 39, wherein the second internal seal is provided by a duckbill valve.

Claim 42. (Previously Presented) The fuel cell system of claim 41, wherein the duckbill valve is sized and dimensioned to limit access to said valve component.

Claim 43. (Previously Presented) The fuel cell system of claim 1, wherein the housing of at least one valve component comprises a nozzle sized and dimensioned to limit access to the internal seal.

Claim 44. (Previously Presented) The fuel cell system of claim 1, wherein the housing of at least one valve component comprises a sleeve covering the housing and the sleeve is sized and dimensioned to limit access to the internal seal.

Claim 45. (Previously Presented) The fuel cell system of claim 1, wherein the fuel supply comprises a fuel cartridge.

Claim 46. (Previously Presented) The fuel cell system of claim 1, wherein the fuel supply comprises a fuel container.

Claim 47. (Previously Presented) The fuel cell system of claim 1, wherein the fuel supply comprises a fuel line.

Claim 48. (Previously Presented) The fuel cell system of claim 1, wherein at least one valve component is initially covered by a covering member and the covering member is removed before the valve components are connected to each other.

Claim 49. (Previously Presented) The fuel cell system of claim 48, wherein the covering member comprises a cap.

Claim 50. (Previously Presented) The fuel cell system of claim 49, wherein the covering member comprises a film.

Claim 51-98. (Canceled)

Claim 99. (Previously Presented) The fuel cell system of claim 1, wherein each valve component has a different biasing force.

Claim 100. (Previously Presented) The fuel cell system of claim 13, wherein the spring constant of the spring in the valve component connected to the fuel supply is lower than the spring constant of the spring in the valve component connected to the fuel cell.

Claim 101. (Previously Presented) A valve comprising:

a first valve component connected to one of either a fuel supply or a fuel cell adapted to provide electricity for an electronic device,

a second valve component connected to the other of either a fuel supply or a fuel cell adapted to provide electricity for an electronic device,

wherein each valve component comprises a housing and a slidable inner body biased by a spring, wherein the slidable inner body cooperates with a sealing member to form an internal seal in each valve component, wherein the valve components cooperate with each other to open the internal seal in each valve component, and wherein the spring constant of the spring in the valve component connecting to the fuel cell is lower than the spring constant of the spring in the valve component connecting to the fuel supply so that the valve component connecting to the fuel cell opens before the other valve component opens.

Claim 102. (Previously Presented) The valve of claim 101, wherein during connection the first valve component and the second valve component form an inter-component seal at least before the internal seals open to create a fluid flow path through the valve.

Claim 103. (Previously Presented) The valve of claim 101, wherein the slidable inner body comprises a pushrod.

Claim 104. (Previously Presented) The valve of claim 101, wherein the spring is made from stainless steel or elastomeric material.

Claim 105. (Previously Presented) The valve of claim 101, wherein the sealing member is an o-ring.

Claim 106. (Previously Presented) The valve of claim 105, wherein the internal seal is located between the o-ring and the slidable inner body.

Claim 107. (Previously Presented) The valve of claim 102, wherein the inter-component seal is formed by a portion of the housing of the first valve component and the sealing member of the second valve component.

Claim 108. (Previously Presented) The valve of claim 102, wherein the inter-component seal is formed by a portion of the housing of the second valve component and the sealing member of the first valve component.

Claim 109. (Previously Presented) The valve of claim 102, wherein the inter-component seal is formed before any internal seal opens.

Claim 110. (Previously Presented) The valve of claim 102, wherein the fluid flow path comprises a space between the housing and the slidable inner body.

Claim 111. (Previously Presented) The valve of claim 102, wherein the fluid flow path comprises at least one channel defined on the slidable inner body.

Claim 112. (Previously Presented) The valve of claim 101, wherein the valve further comprises a retainer to keep the two valve components in the connected position.

Claim 113. (Previously Presented) The valve of claim 101, wherein the fuel supply comprises a fuel cartridge, a fuel container, or a fuel line.

Claim 114. (Previously Presented) The valve of claim 101, wherein the valve component connecting to the fuel supply is initially covered by a covering member and the covering member is removed before the valve components are connected to each other.